



SEQUENCE LISTING

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Lohse, Jesper  
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Manoharan, Muthiah  
Kiely, John  
Griffith, Michael  
Sprankle, Kelly

<120> Peptide Nucleic Acid Conjugates

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<140> 08/817,067

<141> 1997-04-04

<150> PCT/US95/12931

<151> 1995-10-06

<150> USSN 08/319,411

<151> 1994-10-06

<150> 08/088,658

<151> 1993-07-02

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<150> 08/275,951

<151> 1994-07-15

<150> 986/91

<151> 1991-05-24

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<170> PatentIn Ver. 2.1

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position with phenanthroline via a thiol linker of  
the structure

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of the structure

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designated monomer

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<222> (9)  
<223> a pentyl N-phthaloyl oxymethyl group at the serine  
-O portion of the designated monomer

<220>  
<221> misc\_feature  
<222> (18)  
<223> a pentyl N-phthaolyloxymethyl group at the serine  
-O portion of the designated monomer

<400> 83  
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<210> 84  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
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<220>  
<221> misc\_feature  
<222> (9)  
<223> a 9-acridinyl group attached via a linking moiety  
to the C-1 position of the 2-aminoethyl portion of  
the indicated monomer

<400> 84  
ctgtctccat cctcttcact

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<210> 85  
<211> 20  
<212> DNA  
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<220>

<223> Description of Artificial Sequence: Novel Sequence

<220>

<221> misc\_feature

<222> (9)

<223> a 9-acridinyl group attached via a linking moiety  
to the serine O- position on the designated  
monomers in the oligomer

<220>

<221> misc\_feature

<222> (18)

<223> a 9-acridinyl group attached via a linking moiety  
to the serine O- position on the designated  
monomers in the oligomer

<400> 85

ctgtctccat cctcttcact

20

<210> 86

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Novel Sequence

<220>

<221> misc\_feature

<222> (9)

<223> a 2-porphyrin group tethered to the C-1 position  
of the 2-aminoethyl portion of the designated PNA  
oligomer

<400> 86

ctgtctccat cctcttcact

20

<210> 87

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Novel Sequence

<220>

<221> misc\_feature

<222> (9)

<223> a photonuclease/intercalator ligand attached with  
a tether to the C-1 position of the 2-aminoethyl  
portion of the designated monomer in the oligomer

<400> 87

ctgtctccat cctcttcact

20

<210> 88

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Novel Sequence

<220>

<221> misc\_feature

<222> (9)

<223> a photonuclease/intercalator ligand attached with  
a tether to the serine O- position of the  
designated monomers in the oligomer

<220>

<221> misc\_feature

<222> (18)

<223> a photonuclease/intercalator ligand attached with  
a tether to the serine O- position of the  
designated monomers in the oligomer

<400> 88

ctgtctccat cctcttcact

20

<210> 89

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

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<220>

<221> misc\_feature

<222> (9)

<223> a bipyridinyl complex attached via a linker to the C-1 position of the 2-aminoethyl portion of the designated monomer in the oligomer

<400> 89

ctgtctccat cctcttcact

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<210> 90

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Novel Sequence

<220>

<221> misc\_feature

<222> (9)

<223> a pentylamino oxymethyl group attached at the C-1 of the 2-aminoethyl portion of the designated monomer in the oligomer

<400> 90

ctgtctccat cctcttcact

20

<210> 91

<211> 20

<212> DNA

<213> Artificial Sequence

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<220>

<221> misc\_feature

<222> (9)

<223> an HSAB group attached via a tether to the C-1 position of the 2-aminoethyl portion of the designated monomer in the oligomer

<400> 91

ctgtctccat cctcttcact

20

<210> 92



<211> 20  
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<222> (9)  
<223> a 6 hexanoate group attached via a tether to the  
C-1 position of the 2-aminoethyl portion of the  
designated monomer in the oligomer

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<210> 93  
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<223> an imidazolyl group attached via a tether to the  
C-1 position of the 2-aminoethyl portion of the  
designated monomer in the oligomer

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<210> 94  
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<220>  
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<220>  
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<222> (9)

<223> complexed Gadolinium ion attached via a tether to the C-1 position of the 2- aminoethyl portion of the designated monomer in the oligomer

<400> 94

ctgtctccat cctcttcact

20

<210> 95

<211> 20

<212> DNA

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<220>

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<220>

<221> misc\_feature

<222> (9)

<223> cholesterol attached via a tether to the C-1 position of the 2-aminoethyl portion of the designated monomer in the oligomer

<400> 95

ctgtctccat cctcttcact

20

<210> 96

<211> 20

<212> DNA

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<222> (9)

<223> a cholesterol attached via a tether to the serine O-position of the designated monomers in the oligomer

<220>

<221> misc\_feature

<222> (18)

<223> a cholesterol attached via a tether to the serine O-position of the designated monomers in the oligomer

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20

<210> 97  
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<220>  
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<222> (3)  
<223> a cholesterol group attached via a tether to the  
C-1 position of the 2-aminoethyl portion of the  
monomer in the oligomer

<400> 97  
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4

<210> 98  
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<220>  
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<400> 98  
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10

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<400> 99  
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10

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<400> 104  
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<400> 110  
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<210> 115  
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<400> 116  
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<400> 119  
ttctttctttt 10



<210> 120  
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<400> 120  
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<400> 127  
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ctcttttttt 10

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<400> 132  
tgtacgtcac aacta 15

<210> 133  
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tgtacgtcac aacta 15

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ttctttctttt 10

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<400> 137  
ttctttctttt 10

<210> 138  
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<210> 139  
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<210> 140  
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<400> 140  
ctcttttttt 10

<210> 141  
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<400> 141  
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<210> 142  
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gcatgcat 8

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<400> 145  
gcatgcat 8

<210> 146  
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<210> 147  
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<220>  
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<220>  
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<222> (5)  
<223> the incorporation of a monomeric unit containing a

protected thiol functionality

<400> 147

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18

<210> 148

<211> 22

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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Novel Sequence

<220>

<221> misc\_feature

<222> (20)

<223> the incorporation of a monomeric unit containing a  
protected thiol functionality

<400> 148

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22

<210> 149

<211> 10

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Novel Sequence

<400> 149

ttcttctttt

10

<210> 150

<211> 20

<212> DNA

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<220>

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<220>

<221> misc\_feature

<222> (10)..(11)

<223> Lysine, AHA, Lysine, AHA, Lysine linkage



<400> 150  
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20

<210> 151  
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<400> 151  
aaaagaagaa

10

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<220>  
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16

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16

<210> 154  
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<220>  
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<400> 154  
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10

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<220>  
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<400> 155  
tcgacttttc tttttg

16

<210> 156  
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<220>  
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16

<210> 157  
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<400> 157  
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10

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gaagaagaaa atgca

15

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gttttcttct tctgca

16

<210> 160  
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16

<210> 161  
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<400> 161  
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10